



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/088,825	08/30/2002	Todd M Upton	C1005/7009	5262

23628 7590 12/15/2003

WOLF GREENFIELD & SACKS, PC
FEDERAL RESERVE PLAZA
600 ATLANTIC AVENUE
BOSTON, MA 02210-2211

EXAMINER

BEISNER, WILLIAM H

ART UNIT	PAPER NUMBER
----------	--------------

1744

DATE MAILED: 12/15/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

7KB

Office Action Summary

Application No.

10/088,825

Applicant(s)

UPTON ET AL.

Examiner

William H. Beisner

Art Unit

1744

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 March 2002 (Preliminary Amd.).
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 14, 15, 23, 28, 38, 49, 53, 55, 56 and 62 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 23, 28, 38 and 49 is/are allowed.
- 6) ☒ Claim(s) 1-5, 14, 15, 53, 55, 56 and 62 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4. 6) ☐ Other:

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement filed 30 Aug. 2002 has been considered and made of record.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-5, 14, 16, 53, 55, 56 and 62 are rejected under 35 U.S.C. 102(b) as being anticipated by Kuriyama (US 5,728,577).

With respect to claims 1 and 53, the reference of Kuriyama discloses a bioreactor (1) that includes a vessel (4) for holding a liquid culture media; a matrix assembly (32) mounted in the vessel (4) for movement in the media, the matrix assembly (32) including a support (33) and a plurality of three-dimensional porous matrix members (23) carried by the support for movement therewith; and a drive member (15) operatively coupled to the support for moving it with the matrix members through the media.

With respect to claim 2, the support includes a shaft (16,33); an outwardly extending member (34 or 35) connected to the shaft (16, 33) and a holder (22,24,25) for carrying at least

Art Unit: 1744

one three-dimensional porous matrix member (23) and mounted on the outwardly extending member (34 or 35).

With respect to claim 3, the holder (22, 24, 25) is removably attached to the outwardly extending member (See column 4, lines 41-51).

With respect to claim 4, the outwardly extending member carries a plurality of holders (22, 24, 25) (See Figure 1).

With respect to claim 5, the holder (22) can be filled with a plurality of porous particles (See column 5, lines 6-24).

With respect to claims 14, 15 and 55, see the discussion of claims 2 and 4 above. Also, the reference of Kuriyama discloses that shaft (16) is disposed in the vessel (4) and supported for rotation by cover (14).

With respect to claim 56, the holder (22, 24, 25) include means (36) for mounting the holder to the support; engaging means (25B) for carrying a three-dimensional porous matrix (23); and a three-dimensional porous matrix (23) attached to the holder by the engaging means.

With respect to claim 62, the device as disclosed by the reference of Kuriyama is used for in vitro cell culture (See column 1, lines 5-15).

4. Claims 1-4, 53 and 62 are rejected under 35 U.S.C. 102(b) as being anticipated by Hitachi (JP 04-126068).

With respect to claims 1 and 53, the reference of Hitachi discloses a bioreactor that includes a vessel (12) for holding a liquid culture media; a matrix assembly (13) mounted in the vessel (12) for movement in the media, the matrix assembly (13) including a support (See Figure

Art Unit: 1744

5) and a plurality of three-dimensional porous matrix members (20) carried by the support for movement therewith; and a drive member (56, 58, 60, 62) operatively coupled to the support for moving it with the matrix members through the media.

With respect to claim 2, the support includes a shaft (14); an outwardly extending member (See Figure 5) connected to the shaft (14) and a holder (See o-ring in Figure 5) for carrying at least one three-dimensional porous matrix member (20) and mounted on the outwardly extending member (See Figure 5).

With respect to claim 3, the holder (See o-ring in Figure 5) is removably attached to the outwardly extending member.

With respect to claim 4, the outwardly extending member carries a plurality of holders (See Figure 2).

With respect to claim 62, the device as disclosed by the reference of Hitachi is used for in vitro cell culture (See the English language abstract).

5. Claims 1-3, 5, 53 and 62 are rejected under 35 U.S.C. 102(b) as being anticipated by Krovak et al.(US 4,683,062).

With respect to claims 1 and 53, the reference of Krovak discloses a bioreactor that includes a vessel (1) for holding a liquid culture media; a matrix assembly (3) mounted in the vessel (1) for movement in the media, the matrix assembly (3) including a support (12) and a plurality of three-dimensional porous matrix members (14) carried by the support for movement therewith; and a drive member (13) operatively coupled to the support for moving it with the matrix members through the media.

Art Unit: 1744

With respect to claim 2, the support includes a shaft (10); an outwardly extending member (12) connected to the shaft (10) and a holder (3) for carrying at least one three-dimensional porous matrix member (14) and mounted on the outwardly extending member (12).

With respect to claim 3, the holder (3) is removably attached to the outwardly extending member by fasteners (30).

With respect to claim 5, the holder (3) can be filled with a plurality of porous particles (14).

With respect to claim 62, the device as disclosed by the reference of Krovak et al is used for in vitro cell culture (See column 1, lines 9-14).

Allowable Subject Matter

6. Claims 23, 28, 38 and 49 are allowed.

7. The following is a statement of reasons for the indication of allowable subject matter:

Claims 23, 28, 38 and 49 are allowable because the prior art of record fails to disclose the combination of elements as recited in these claims, especially the presence of a groove in each of the arms of the "U"-shaped holder for removably holding a three-dimensional porous matrix member and/or the presence of a closure-cap detachably mounted on the open end of the "U"-shaped holder wherein the cap prevents the porous matrix member from being withdrawn from the holder and includes a handle for removing the cap from the holder and for carrying the assembly without touching the matrix members in the holder.


Art Unit: 1744

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to William H. Beisner whose telephone number is 703-308-4006 (571-272-1269 after 12/16/03). The examiner can normally be reached on Tues. to Fri. and alt. Mon. from 6:40am to 4:10pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert J. Warden can be reached on 703-308-2920 (571-272-1281 after 12/16/03). The fax phone number for the organization where this application or proceeding is assigned is 703-872-9310.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.


William H. Beisner
Primary Examiner
Art Unit 1744

WHB